

AUROBAS.

Auroral displays of August, 1892.

Date.	Station.	Extent of display.		Remarks.
		Azimuth.	Altitude.	
6	Sault Ste. Marie, Mich..	180 to 270	25	Arch of green color resting on dark segment.
8	Havre, Mont.....	Cov'd 180	Zenith	An arch, with beams.
12	Philadelphia, Pa	In north.	25	A diffused white light, with beams, which had a lateral movement toward the west.
12-13	Sault Ste. Marie, Mich..	180 to 270	85	Green color.
12	Bismarek, N. Dak.....	135 to 250	30	Arch, with streamers.
12-13	Rapid City, S. Dak		30	Pale beams moved from east to west.

Auroral displays of July, 1892—Continued.

Date.	Station.	Extent of display.		Remarks.
		Azimuth.	Altitude.	
12	Lander, Wyo			Two white beams tinged with green, and yellow beams along horizon.
17	Sault Ste. Marie, Mich..	135 to 225	20	Green color.
19	Sault Ste. Marie, Mich..	180 to 270	20	Green color.
23	Northfield, Vt.....	190 to 235	15	Pale green color.
23	Fort Buford, N. Dak.....	190 to 235	15	Diffused white light, with streamers.
24	Duluth, Minn.....	Cov'd 90	Zenith	Beams of bright light.
28	Alpena, Mich	135 to 190	35	Streamers of white light.

INLAND NAVIGATION.

STAGE OF WATER IN RIVERS.

The following table shows the danger-points at the various river stations; the highest and lowest stages for the month, with the dates of occurrence, and the monthly ranges:

Heights of rivers above low-water mark, August, 1892 (in feet and tenths).

Stations.	Danger-point on gauge.	Highest water.		Lowest water.		Monthly range.
		Height.	Date.	Height.	Date.	
<i>Red River.</i>						
Shreveport, La	29.9	6.0	1	1.0	25	5.0
<i>Arkansas River.</i>						
Fort Smith, Ark	22.0	5.2	31	1.5	26	3.7
Little Rock, Ark	23.0	8.5	1, 31	7.0	13	1.5
<i>Missouri River.</i>						
Fort Buford, N. Dak	11.0		1	6.6	28	4.4
Bismarck, N. Dak		6.4	1	2.5	31	3.9
Pierre, S. Dak	14.0	3.7	1	1.7	31	2.0
Sioux City, Iowa	18.7	10.8	1	6.3	28-30	4.5
Omaha, Nebr	18.0	11.0	1	7.8	30, 31	3.2
Kansas City, Mo	21.0	13.5	1	8.1	31	5.4
<i>Mississippi River.</i>						
Saint Paul, Minn	14.0	6.4	1	3.3	29	3.1
La Crosse, Wis	11.8	6.9	3	2.8	29	4.1
Dubuque, Iowa	16.0	7.9	7-9	4.2	31	3.7
Davenport, Iowa	15.0	5.6	10-13	3.2	31	2.4
Keokuk, Iowa	14.0	6.4	1	3.7	26	2.7

Heights of rivers—Continued.

Stations.	Danger-point on gauge.	Highest water.		Lowest water.		Monthly range.
		Height.	Date.	Height.	Date.	
<i>Mississippi River—Continued.</i>						
Hannibal, Mo	17.0	7.8	1, 2	4.8	27, 28	3.0
Saint Louis, Mo	30.0	18.8	1	9.5	29-31	9.3
Cairo, Ill	40.0	20.7	1	10.3	31	10.4
Memphis, Tenn	33.0	17.6	1	7.8	31	9.8
Vicksburg, Miss	41.0	36.6	1	11.6	31	25.0
New Orleans, La	13.0	13.5	1	4.7	29-31	8.8
<i>Ohio River.</i>						
Parkersburg, W. Va.	38.0	7.0	1, 2	2.7	12	4.3
Cincinnati, Ohio	45.0	10.8	7	5.5	30, 31	5.3
Louisville, Ky	24.0	5.8	9	3.6	31	2.2
<i>Cumberland River.</i>						
Nashville, Tenn	40.0	3.5	1	1.7	22	1.8
<i>Tennessee River.</i>						
Chattanooga, Tenn	33.0	4.9	6	2.7	25	2.2
<i>Monongahela River.</i>						
Pittsburg, Pa	29.0	6.7	29	5.0	13	1.7
<i>Savannah River.</i>						
Augusta, Ga	32.0	11.9	26	6.7	23	5.2
<i>Willamette River.</i>						
Portland, Oregon	15.0	8.0	1	2.5	31	5.5
<i>Susquehanna River.</i>						
Harrisburg, Pa	17.0	4.2	16	1.8	3, 24	2.4
<i>Alabama River.</i>						
Montgomery, Ala	48.0	18.5	20	2.4	6, 7	16.1

STATE WEATHER SERVICES.

[Temperature in degrees Fahrenheit; precipitation, including melted snow, in inches and hundredths.]

The following extracts and summaries are republished from reports for August, 1892, of the directors of the various state weather services:

ALABAMA.

Temperature.—The mean was 0.2 below the normal; maximum, 100, at Brewton, 12th; minimum, 56, at Valley Head, 4th and 14th; greatest monthly range, 38, at Jasper; least monthly range, 16, at Cheplatepec.

Precipitation.—The average was 2.03 above the normal; greatest monthly, 13.55, at Brewton; least monthly, 2.19, at Carrollton.

Wind.—Prevailing direction, east.—*P. H. Mell, Observer, Weather Bureau, Auburn, director.*

ARIZONA.

Temperature.—Maximum, 123, at Fort Mohave, 5th; minimum, 46, at Fort Apache, 30th, and at Holbrook, 30th and 31st; greatest monthly range, 60, at Fort Mohave; least monthly range, 28, at Farleys Camp.

Precipitation.—Greatest monthly, 3.40, at Walnut Ranch; least monthly, 0.00, at Fort Mohave, Phoenix, and Rancho del Pueblo.

Wind.—Prevailing direction, southwest.—*J. C. Hayden, Observer, Weather Bureau, Tucson, director.*

ARKANSAS.

Temperature.—The mean was 0.2 above the normal; maximum, 106, at Keesees Ferry, 6th; minimum, 47, at Fayetteville, 31st; greatest monthly range, 54, at Keesees Ferry; least monthly range, 24, at Greenville, Miss.

Precipitation.—The average was 1.58 above the normal; greatest monthly, 8.54, at Dallas; least monthly, 0.78, at Harrison.

Wind.—Prevailing direction, south.—*M. F. Locke, Commissioner of Agriculture, Little Rock, director; F. H. Clarke, Local Forecast Official, Weather Bureau, assistant.*

CALIFORNIA.

Temperature.—The mean was 0.2 below the normal; maximum, 117, at

Needles, 4th and 17th; minimum, 38, at Nordhoff, 11th; greatest monthly range, 72, at Nordhoff; least monthly range, 14, at Ventura.

Precipitation.—The average was 0.06 below the normal; greatest monthly, 0.11, at Julian; least monthly, 0.00, at a number of stations.

Wind.—Prevailing direction, west.—*J. A. Barwick, Observer, Weather Bureau, Sacramento, director.*

COLORADO.

Temperature.—The mean was 2.0 above the normal; maximum, 108, at Lamar, 4th; minimum, 21, at Breckenridge, 30th; greatest monthly range, 76, at Steamboat Spring; least monthly range, 43, at Cumbres.

Precipitation.—The average was 1.00 below the normal; greatest monthly, 5.29, at Avoca; least monthly, 0.00, at Rico, Saint Cloud, and Steamboat Spring.

Wind.—Prevailing direction, west.—*W. S. Miller, Observer, Weather Bureau, Denver, director.*

FLORIDA.

Temperature.—Maximum, 101, at Micco, 12th; minimum, 67, at Plant City, 8th; greatest monthly range, 33, at Micco; least monthly range, 15, at Clermont.

Precipitation.—Greatest monthly, 13.74, at Oxford; least monthly, 1.59, at Key West.

Wind.—Prevailing direction, southeast.—*E. R. Demain, Observer, Weather Bureau, Jacksonville, director.*

GEORGIA.

Temperature.—Maximum, 100, at Cordele, 1st; minimum, 58, at Lafayette, 14th; greatest monthly range, 39, at Adairsville; least monthly range, 18, at Hepzibah.